their professional field. To adjust for this, the data presented in this report include only those individuals who indicated on their annual renewal form that they were working in North Carolina and were actively engaged in the profession.<sup>2</sup>

## III. Analysis

This 20-year report tracks the supply of licensed health professionals (illustrated in graphs) and their distribution across the state (illustrated in maps) over the 20-year period from 1979-1998. Supply data for each of the 16 professions are depicted in three separate different graphs: 1. practitioners per 10,000 population ratios for the state compared to national trends (when comparable national data are available); 2. practitioners per 10,000 population ratios for metropolitan vs. nonmetropolitan counties; and 3. practitioners per 10,000 population ratios for areas that the federal government has persistently designated as health professional shortage areas (HPSAs). Three maps are also included for each profession to illustrate: 1. the 1998 practitioners per 10,000 population ratio; 2. the change in practitioners per 10,000 population ratio from 1979 to 1988 by county; and 3. the change in practitioners per 10,000 population ratio from 1989 to 1998 by county.

## A. Graphs

## 1. Practitioners per 10,000 Population Ratios: US and NC

North Carolina's population has grown dramatically over the last twenty years. While the overall population of the US has increased by about 20% since 1979, North Carolina's population has increased by almost 30% (Figure 1). The population has grown fastest in the urbanized counties that form an arc linking Raleigh, Durham, Greensboro, Winston-Salem and Charlotte with the other urban areas of Asheville, Fayetteville and Wilmington experiencing similar growth (Figures 2, 3, 4). Some rural counties, generally those on the coast or in the mountains with recreational or retirement potential, also saw a substantial population expansion. Any examination of the changes in the supply and distribution of the health care workforce must take into account this rapid population growth, as well as the differences in growth rates across counties of the state. To account for these factors, changes in the supply of health care professionals over the 20 years are illustrated for the state and the nation by examining their number per 10,000 people per year. This practitioners per 10,000 population ratio provides a better mechanism to compare the supply and distribution of health professionals across varying geographic areas than would be obtained from use of simple raw counts.

## 2. Practitioners per 10,000 Population Ratios: Metropolitan-Nonmetropolitan NC

Health care professionals are not distributed evenly across North Carolina; they tend to concentrate in and around cities, and those practitioners in nonmetropolitan locations are more likely to locate in larger rural towns. To illustrate the differences between metropolitan and nonmetro-

<sup>&</sup>lt;sup>1</sup>Active status does not always indicate that the health care professional is seeing patients. Active status is self-designated and may include administrators, researchers and educators who are active in the profession but are not engaged in direct clinical practice. Active status is assigned to individuals who do not report their status and to those individuals who report a business address or hours but do not report their status.